WHAT IS CLAIMED IS:

1. A communication protocol processing unit formed by a multiprocessor, comprising:

a first processor for performing a process demanding a real time property on a stream of communication data; and

a second processor for performing a process not demanding the real time property, wherein

the first processor transfers using parameters paired with the communication data to be processed to the second processor, and the second processor is structured so as to refer to the transferred communication data and parameters to process.

2. The communication protocol processing unit by a multiprocessor according to claim 1, wherein

the parameters are state transitional information, statistical information, or various setting information which is needed for a process excluding the communication data.

3. The communication protocol processing unit by a multiprocessor according to claim 1, further comprising:

a processing queue provided between the first and second processors, for storing a pair of the communication data and parameters.

4. The communication protocol processing unit by a

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multiprocessor according to claim 3, wherein

the first processor is structured so as to generate a processing demand signal for demanding the processing to the second processor,

5   before the first processor generates the processing demand signal, the communication data and parameters are first unconditionally transferred to the processing queue, and

the processing queue can independently display validity/invalidity of the transferred data to the processing

10   queue according to presence or absence of the processing demand signal from the first processor.

5.   A communication protocol processing unit by a multiprocessor comprising:

15   a plurality of first processors arranged in series to pipeline-process for performing a process demanding a real time property on a stream of communication data; and

a second processor for performing a process not demanding the real time property, wherein

20   each of the first processors transfers using parameters paired with the communication data to be processed to the second processor, and the second processor is structured so as to refer to the transferred communication data and parameters to process.

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6.   The communication protocol processing unit by a multiprocessor according to claim 5, wherein

each of the plurality of first processors is structured so as to generate the processing demand to the second processor, and forward the processing demand and parameters to the latter step first processor, and transfer to the processing queue collectively at the final step.

7.   The communication protocol processing unit by a multiprocessor according to claim 5, wherein

each of the plurality of first processors generates the processing demand to the second processor, and further transfers the communication data or parameters to the processing queue unconditionally, and thereafter the queue can judge independently validity/invalidity of the data transferred to the processing queue according to presence or absence of the processing demands.

8.   The communication protocol processing unit by a multiprocessor according to claim 6, wherein

the processing demands and parameters are structured so as to be laminated in each of the plurality of first processors.

9.   The communication protocol processing unit by a multiprocessor according to claim 7, wherein

the processing demands and parameters are structured so as to be laminated in each of the plurality of first processors.

10.   The communication protocol processing unit by a

multiprocessor according to any one of claim 2, wherein

the communication data are directly transferred to the processing queue not via the first processor with reception of the communication data as an event.

11. A communication protocol processing unit by a multiprocessor according to any one of claim 1, further comprising:

a queue for storing the processing results of the second processor in between the first and second processors; and

a selection circuit as means for overwriting the communication data on a stream to the processing results of the second processor, whereby

the first processor accesses to read the queue, and switches a selection route of the selection circuit to a side of the queue if the data are accumulated in the queue.

12. The communication protocol processing unit by a multiprocessor according to claim 11, further comprising:

a register indicating whether or not data are accumulated in the queue for storing the processing results of the second processor; and

a readout control circuit for reading out the data accumulated in the queue,

wherein the first processor does not access the queue, and reads out a set status of the register, thereby recognizing a data accumulation of the queue, and

wherein the readout control circuit is accumulated when the data are accumulated, and reads out the data of the queue not via the first processor.

5   13.   The communication protocol processing unit by a multiprocessor according to any one of claim 6,

wherein a timing for forwarding the processing demands and parameters is taken with next reception of the communication data as the event.